

Position Statement

On Periodical Technical Inspections / Road Worthiness Testing

Periodical Technical Inspection (PTI) is commonly seen as a tool to make sure vehicles on the road are in good technical condition. The Federation of European Motorcyclists' Associations (FEMA) does not put into question the need for powered two wheelers (PTWs) to also be in good condition on the road. However, FEMA argues that PTI will not improve road safety and only represents an additional and unjustified burden for motorcyclists. Discretion whether to include PTWs into PTI and the recognition of PTI results of other Countries must be left to the Member States.

The reasons why the members of FEMA oppose harmonized and extended PTI for PTWs are the following:

1. A priori PTI is considered to contribute to road safety. Studies commissioned by testing authorities¹ regularly confirm this impression. However, independent studies² put the safety benefit of such testing regimes into question.
2. Motorcycle in-depth studies highlight that human behaviour is the primary causation factor of accidents involving PTWs. Technical failures only account for 0.3% of all primary accident contributing factors³. It is doubtful that an extension of PTI regimes would be able to reduce this number significantly.
3. Countries in Europe having PTI regimes for PTWs⁴ do not show improved accident figures.
4. Users of PTW are more aware of the technical condition of their vehicle simply because most technical problems directly impact riding conditions. Besides, the vast majority of riders are well aware of the risks related to riding a PTW and are clearly more safety conscious than most car drivers. This fact provoked some EU countries (e.g. Sweden) to alter PTI requirements for PTWs. Moreover, **technical failures of PTWs require instant action. Reliance on regular annual or bi-annual inspection is misleading.** Hence, awareness campaigns, targeting riders having a less passionate relationship with their PTW (along with novice riders in particular), are able to further decrease the small fraction of accidents caused by technical failures.
5. Geographical considerations have to be taken into account: in less densely populated EU regions (e.g. Nordic countries) a considerable amount of time is needed to reach an appropriate testing centre. Road conditions also vary tremendously from one member state to another, impacting the specific needs for PTI.
6. As for the environment, the testing of exhaust emissions is not up to date. Up to now, there is still no harmonized testing methodology allowing exhaust emissions to be assessed consistently.
 - ⇒ Extended warranties from manufacturers are the best incentive for regular technical maintenance of PTWs. This enhances the relationship between the user and a garage, which in turn is the best option to ensure the good technical condition of PTWs on the road.

These points will be further developed below. The members of FEMA hope that the arguments brought forward will protect the users of PTWs from unnecessary administrative burdens and recognises their specific characteristics.

¹ E.g. the AUTOFORE Report 'Study on the Future Options for Roadworthiness Enforcement in the European Union' by CITA

² Christensen, Peter and Elvik, Rune 2007: *Effects on accidents of periodic motor vehicle inspection in Norway*. Accident Analysis and Prevention (39) pp. 47-52

³ MAIDS 2009: In-depth investigation of accidents involving powered two wheelers. Version 2.0

⁴ EU Member states still lacking PTI for PTWs: Belgium, Finland, France, Greece, Malta, the Netherlands and Portugal.

Who benefits from PTI?

The original intention of PTI was to increase the safety of users of motor vehicles. In most Member States independent testing bodies were assigned to periodically check the most safety critical parts of the vehicles, usually brakes, electric lightning, steering and tyres/wheels. Over time, emission testing became part of the testing procedures as well.

The detection of severe technical defects usually prevents the use of the vehicle on public roads until the repair of the detected defect is proved. For the vehicle users who are maintaining their vehicle regularly by themselves or having them regularly checked by a private garage as part of guarantee regulations, PTI regimes may appear nothing else than an additional administrative burden.

Organisations carrying out PTI regularly publish studies highlighting the safety benefit of PTI and indicating the need for extending PTI to a wider group of vehicles. Regardless the improvements achieved in the liability of vehicles, the AUTOFORE Report published by the International Motor Vehicle Inspection Committee (CITA) concludes that "the need for roadworthiness enforcement is greater than ever..."(AUTOFORE: 2).

Since the main interest of testing organisations is testing, the report detects that "electronically controlled systems on vehicles have failure rates comparable to mechanical systems that are considered important enough to be included in periodic inspections" (AUTOFORE: 2) and identifies enough evidence to include all PTWs into Directive 96/96/EC regardless there might be "...problems with the inclusion of mopeds, but this objective should be pursued" (AUTOFORE: 3). These conclusions are drawn "[a]lthough an economic analysis could not be undertaken to quantify the magnitude of the benefits ..." (AUTOFORE: 3).

The results of scientific research put overall PTI benefit into question

In the course of the EEA treaty with the EU Norway introduced extended (more severe) PTI in 1995. An independent study evaluated the effects of PTI on car accidents in Norway (Christensen & Elvik 2006) applying negative binominal regression models to accident data stemming from an insurance company and the Public Roads Administration.

While a previous study of Fosser (1992) had already put the beneficial effect of Norwegian PTI into question, this more recent study indicates as well that the potential of PTI to prevent accidents might be overrated. Christensen and Elvik (2006: 51) conclude that "[t]here is no evidence of any effect on accident rates of periodic inspections". Following their findings PTI does not fail to repair technical effects, but even though "[f]ollowing periodic inspections, the accident rate of inspected cars does not decline, but shows a weak tendency to increase" (Christensen & Elvik 2006: 51). Based on this the scholars developed a challenging hypothesis: "When a car is inspected, and owners are forced to repair at least the most serious technical defects, behavioural adaptation may occur because owners now think that cars have become safer than before" (Christensen & Elvik 2006: 51).

FEMA always pointed towards human factors as the most crucial cause for accidents and even the figures of some testing bodies show that technical defects are hardly the cause for motorcycles being involved in an accident. In the DEKRA Report (DEKRA 2010) 700 motorcycles following an accident in Germany were tested. The report makes a distinction between "defective" and defects "of relevance to the accident". As a result 8% of the examined accidents showed defects "of relevance to the accident" (DEKRA 2010: 23).

Unfortunately the DEKRA Report fails to explain what exactly had been the most common defects out of these 8% being relevant to the accident but it seems that in most cases the tyres were to blame⁵. Either the tread depth was too shallow, the tyres were defective or the tyre pressure was too low. **FEMA doubts that extended PTI is able to lower such defects since tyre pressure and tyre condition have to be checked constantly.** FEMA is convinced that awareness campaigns, e.g. at petrol stations where tyre pressure can be checked, will be more useful to prevent users of PTWs from accidents caused by malfunctioning tyres.

⁵ When listing the defects detected, DEKRA no longer distinguishes between "defects" and "defects of relevance to the accident".

The Maids study provided by ACEM, the European Association of Motorcycle Manufacturers, examines a sample of 921 accidents with PTW involvement in 5 EU Member States. A total of 3 cases (0.3 %) of vehicle failures, which were to blame as “primary accident contributing factor”, are reported (Maids 2009: 29). Apparently, the specifications of what is considered as ‘a defect responsible for the accident’ differs between the studies of ACEM and DEKRA.

The results of both studies indicate that the impact of technical defects on accidents seems to be rather low. It ought to be mentioned that the Maids study includes accident data from France and the Netherlands, both countries are lacking PTI for PTWs.

PTI not crucial for accident prevention per se

In countries where PTI has been implemented accident statistics involving PTWs have not improved.

FEMA wants to prevent the users of PTWs in countries without PTI (such as Belgium, Finland, France, Greece, Malta, the Netherlands and Portugal) from having to pay the cost arising from harmonisation as long as there is no consistent evidence that the introduction of PTI would significantly reduce accidents involving PTWs.

Motorcyclists do not rely on periodical technical inspections

Users of PTWs are well aware of the need to maintain their machines in a safe condition. Checking the main components of the motorcycle is actually part of the training and test to obtain the driving licence. A motorcyclist has a closer relation to his vehicle and the majority perform basic vehicle maintenance by themselves. Checking the PTW is easier in comparison to cars since all the safety related parts are usually easy to access.

Being a vulnerable road user, it is always in the interests of the motorcyclist to reduce any possible risk of accident, as he would be the first one to suffer.

Sweden extended testing intervals for motorcycles

Since motorcyclists are more aware of their safety, they check their vehicles regularly. As if to confirm this, and despite having one of the strictest testing regimes in Europe, PTI in Sweden was changed in 2004 for the vehicles showing the best results and least mileage: motorcycles, trailers and caravans. The first PTI is now done after four years and then every second year (before 2004, the first test was conducted after two years and then every year for vehicles of ten years or more). Figure 1 shows that the only vehicles with constantly low failure rates are motorcycles.

Figure 1: PTI Performance of different vehicles in Sweden

Year	Motorcycles	Trailers	Caravans	Cars
2004	9%	19%	16%	32%
2005	9%	22%	13%	32%
2006	10%	26%	22%	32%
2007	10%	26%	19%	32%

Source: Statistics from Bilprovningen⁶, Sweden.

Extended warranty coverage

FEMA considers it as the responsibility of the user of a PTW to ensure his vehicle is performing optimally. At the same time it is also the responsibility of the manufacturer to produce a product that works reliably and safely. Warranties provide the best incentive to ensure both: Manufacturers focusing on reliable products and consumers voluntarily presenting their vehicles for inspections following intervals defined by mileage.

Diversity requires specific regulations

The conditions for motorcyclists, motorcycling culture and awareness of vehicle safety differs considerably among the Member States of the European Union. The technical conditions of a PTW are not only

⁶ Bilprovningen – Motorcyklar- Resultat av kontrollbesiktningar 2004: www.bilprovningen.se

influenced by the age and the mileage of the vehicle, but also by the conditions of the roads they are used on. PTWs ridden on roads in bad conditions require more regular maintenance, which holds even more for countries with a high proportion of gravel roads.

Independent from mileage, extreme cold or solar radiation impacts the technical condition of the PTW, especially when parked outdoors. In some countries new user groups of PTWs are emerging, who might have a less passionate relationship with their vehicles which in turn has an impact on maintenance. Some countries consider modification of vehicles an issue with safety-relevance, others do not. **Hence PTI for PTWs must be left to the discretion of the Member State** as long as its safety benefit for the users of PTWs is clearly proven.

Emissions testing is not an argument in favour of PTI

The members of FEMA unanimously recognize that anthropogenic climate change is an issue of utmost importance, and that the volume of emitted greenhouse gases has to be reduced drastically. Although the contribution of motorcycles to transport-based emissions is very small FEMA agrees that newly built bikes should be low in emissions.

FEMA considers the manufacturer of a vehicle as the main party responsible for the level of emissions the vehicle is producing. If the vehicle fails to comply with standardised emission limits after a certain mileage, the user must not be held liable for the costs arising from repair. If legislators require periodical checks of the emission level, this burden must not be put on the consumer either.

References

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Fosser, S., 1992. An experimental evaluation of the effects of periodic motor vehicle inspection on accident rates. Accident Analysis and Prevention 24, 599-612.

MAIDS 2009: *In-depth investigation of accidents involving powered two wheelers*. Version 2.0

The Federation of European Motorcyclists' Associations

The Federation of European Motorcyclists' Associations (FEMA) is the representative federation of motorcycle (comprising all powered two-wheeled vehicles) users throughout Europe. FEMA represents the interests of 25 citizens' national organisations from 20 countries at the European Union and agencies of the United Nations. FEMA's primary objective is to pursue, promote and protect the interests of motorcyclists. FEMA recognises that motorcycles have different characteristics from other vehicles and emphasises the need for motorcyclists' specific requirements to be addressed.
